UPADATE
TRANSMITTAL OF PRELIMINARY GEOTECHNICAL INFORMATION

WARNER RANCH
SAN DIEGO COUNTY, CALIFORNIA

GEOCON
INCORPORATED
GEOTECHNICAL
CONSULTANTS

PREPARED FOR

COASTAL HOLDINGS LLC /
CAPSTONE PARTNERS LLC
RANCHO SANTA FE, CALIFORNIA

SP06-002

OCTOBER 29, 2009
PROJECT NO 07511-32-01

Project No 07511 32 01
October 29 2009

Coastal Holdings LLC / Capstone Partners LLC
16089 San Dieguito Road Suite H 104
Rancho Santa Fe California 92067 6221

Attention Mr Ali Shapouri

Subject WARNER RANCH
SAN DIEGO COUNTY CALIFORNIA
UPDATE TRANSMITTAL OF PRELIMINARY GEOTECHNICAL INFORMATION

Dear Mr Shapouri

In accordance with your request we have prepared this correspondence to update our report entitled *Transmittal of Preliminary Geotechnical Information Warner Ranch San Diego County California* dated May 5 2005 (Project No 07511 32 01)

Transmitted herewith is the preliminary information from the field portion of our geotechnical investigation performed in April 2005 and a revised tentative map progress print dated October 15 2009 The geologic mapping from our original transmittal has been incorporated onto the new tentative map Also included are the results of requested laboratory testing on soil samples obtained during the study (Tables I through III) A formal presentation of this data will be submitted in a geotechnical investigation report in the event that additional work is performed and a geotechnical investigation report is desired The following information is enclosed herewith

- Laboratory Test Results (Tables I through III)
- Appendix A Logs of exploratory trench excavations (Figures A 1 through A 46)
- Figure 1 (map pocket) Draft Geologic Map depicting the exploratory backhoe trench locations Also shown is the estimated thickness of surficial deposits (including depths to groundwater where encountered) The trenches were excavated with a John Deere 510 rubber tire backhoe

The field investigation was performed on April 13 14 and 15 2005 and consisted of excavating 46 exploratory trenches The scope of the study was intended to assist you in the due diligence phase of property acquisition by identifying geotechnical constraints to development if any In this regard the

main focus of the field investigation was to determine the presence of a published mapped fault trace shown to extend across the proposed development area (Kennedy 2000) and perform a geologic reconnaissance of the site In addition the study evaluated the thickness extent and condition (liquefaction potential) of surficial deposits in selected areas that would require remedial grading Due to the thickness of the alluvium in several areas it will be necessary to perform additional work to properly address compression related settlement and liquefaction

The exploratory trenches indicate that the fault identified on the published geologic map (see List of References No 1) does not exist A continuous 150 foot long trench in addition to several adjacent trenches revealed a transitional igneous intrusive boundary between San Marcos Gabbro and Bonsall Tonalite which evidently was interpreted as a fault related contact (see Geologic Map Figure 1 map pocket) This type of contact was identified in the same area on a regional scale in a previous study (Larsen 1948) This interface represents an ancient (Cretaceous age) emplacement of magma against an even older rock type resulting in an irregular welded contact zone from several feet to several yards wide (see Trench T 2 profile log) The bedrock formations encountered during the study are typically massive but can have discontinuous joints and fractures

The trenches excavated within the drainage courses and surrounding areas encountered surficial deposits consisting of younger and older alluvium underlain by bedrock Limited laboratory testing and our observations indicate that the older alluvium should be suitable for support of proposed embankments and structural loads Further evaluation of this deposit should be performed during future studies as development plans progress

The younger alluvium is poorly consolidated and will require removal and compaction in areas of planned development The estimated thickness and extent of surficial deposits requiring remedial grading is shown on the Geologic Map A description of the materials is presented on the trench logs Based on the trenching remedial grading in the vicinity of the two main drainages will be impacted by the presence of groundwater (see Trenches T 28 T 31 T 32 T 34 T 36 T 37 T 38 and T 39) As a consequence a portion of the alluvium will remain in place requiring short term settlement considerations In addition the grain size characteristics of a sample obtained from Trench T 28 (Figure B 1) suggest that the alluvium may be prone to liquefaction if other conditions such as low density are present

In summary the subsurface study revealed that the fault identified on the published geologic map is not present With respect to alluvium thickness and liquefaction potential the lower portions of the two primary drainages exhibited an alluvium thickness greater than the reach of the backhoe A portion of the alluvium is in a saturated condition which will warrant settlement considerations during site development In addition potentially unfavorable grain size characteristics in the saturated portion

were encountered within some of the trenches Although these areas are relatively limited compared to the overall project we recommend further evaluation of the deposit to adequately address the potential for liquefaction and compression related settlement

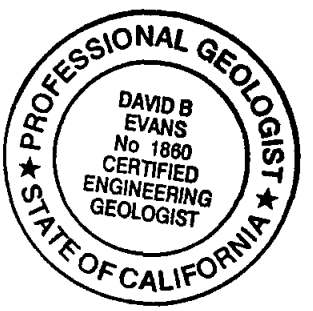
Should you have any questions regarding this transmittal or if we may be of further service please contact the undersigned at your convenience

Very truly yours

GEOCON INCORPORATED

Trevor E Myers
RCE 63773

David B Evans
CEG 1860



TEM DBE dmc

(6) Addressee

TABLE I
SUMMARY OF LABORATORY POTENTIAL OF HYDROGEN (pH) AND RESISTIVITY TEST RESULTS

Sample No	pH	Resistivity (ohm centimeters)
T3 1	6 7	4 800
T19 2	7 2	2 907
T28 1	7 1	18 252

TABLE II
SUMMARY OF LABORATORY WATER SOLUBLE SULFATE TEST RESULTS CALIFORNIA TEST NO 417

Sample No	Water Soluble Sulfate	Sulfate Exposure
T3 1	0 005	Negligible*
T19 2	0 006	Negligible
T28 1	0 002	Negligible

*Reference Table 19 A 4 Uniform Building Code 2000 Edition

TABLE III
SUMMARY OF LABORATORY WATER SOLUBLE CHLORIDE (Cl) ASTM D 1557

Sample No	Description	Cl (%)
T19 1	Old Alluvium	0 006
T28 1	Alluvium	0 007

APPENDIX A

APPENDIX A

TRENCH LOGS

FOR

WARNER RANCH
SAN DIEGO COUNTY, CALIFORNIA

PROJECT NO 07511-32-01

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 1	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					ELEV (MSL) _____ DATE COMPLETED 04 13 2005			
					EQUIPMENT JD 510 24			
					MATERIAL DESCRIPTION			
0					**ALLUVIUM**			
					Loose damp dark brown Silty fine to coarse SAND very porous massive textave with few clean sand layers (well graded)			
2								
4								
				SM				
6								
8					Becomes moist			
10								
12		+ + + + + +			**BONSALL TONALITE** Very weathered light to medium yellow brown moderately strong GRANITIC ROCK, excavates to a silty, very coarse sand			
					TRENCH TERMINATED AT 12/ FEET No groundwater encountered			

Figure A-1,
Log of Trench T 1, Page 1 of 1

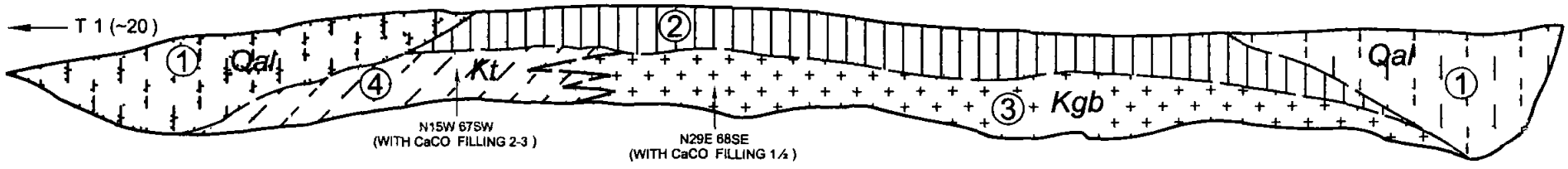
07511 32 01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▣ STANDARD PENETRATION TEST
- ■ DRIVE SAMPLE (UNDISTURBED)
- ⊠ DISTURBED OR BAG SAMPLE
- ◪ CHUNK SAMPLE
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

WARNER RANCH
SAN DIEGO COUNTY, CALIFORNIA



IGNEOUS TRANSITION ~20 + WITH
INCLUSIONS (XENOLITHS) OF GABBRO IN Kt

SCALE
HORIZONTAL 1 ≅ 15
VERTICAL 1 = 10

① ALLUVIUM

② TOPSOIL / COLLUVIUM

③ SAN MARCOS GABBRO (Biotite hornblende rich medium to dark gray brown fine to medium crystalline texture

④ GREEN VALLEY TONALITE (Coarse crystalline texture light to medium brown)

TRENCH T 2

GEOCON
INCORPORATED
GEOTECHNICAL CONSULTANTS
6960 FLANDERS DRIVE SAN DIEGO CALIFORNIA 92121 2974
PHONE 858 558 6900 FAX 858 558 6159

PROJECT NO 007511 32 01
FIGURE A 2
DATE

X:/R14TEMP/1 GEOTECH/1 GEOTECH MICAELA/2005/07511-32-01Warner Ranch/

PROJECT NO 07511 32 01

TRENCH T 3

ELEV (MSL) _____ DATE COMPLETED 04 13 2005

EQUIPMENT JD 510 24

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
0					**ALLUVIUM** Loose damp medium to dark gray brown Silty fine to medium SAND porous roots pinhole pores			
2								
4				SM				
6								
8					**OLD ALLUVIUM** Medium dense damp to moist medium reddish brown Silty fine to medium SAND with some clay grit well graded and indurated			
10				SM				
12			▼		Becomes very moist Seepage at 12 feet			
	T3 1				**SAN MARCOS GABBRO** Weathered damp brownish gray strong biotite hornblende GABBRO ROCK			
					TRENCH TERMINATED AT 13/ FEET Seepage at 12 feet			

Figure A-3,
Log of Trench T 3, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◪ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT *IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES*

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 4 ELEV (MSL) _____ DATE COMPLETED 04 13 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**ALLUVIUM** Loose dry to damp dark grayish brown Silty fine to medium SAND very porous roots			
2								
4				SM	**OLD ALLUVIUM** Medium dense humid to damp reddish brown Silty fine to medium grained SAND trace clay minor pinhole pores in upper 3 5 feet			
6								
8								
10								
12					Becomes moist less porous massive well graded with silt to grit size sand and well indurated			
14								
16								
18								
					TRENCH TERMINATED AT 19/ FEET No groundwater encountered			

Figure A-4,
Log of Trench T 4, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▣ STANDARD PENETRATION TEST
- ■ DRIVE SAMPLE (UNDISTURBED)
- ⊠ DISTURBED OR BAG SAMPLE
- ◪ CHUNK SAMPLE
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 5 ELEV (MSL) _____ DATE COMPLETED 04 13 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose moist dark brown Silty fine to medium SAND porous			
2		+ + + + + + + + + +			**SAN MARCOS GABBRO** Very weathered damp brownish gray strong biotite hornblende GABBRO ROCK			
4					TRENCH TERMINATED AT 5 FEET No groundwater encountered			

Figure A-5,
Log of Trench T 5, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◥ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 6 ELEV (MSL) _____ DATE COMPLETED 04 13 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose very moist dark brown Silty fine SAND porous			
2					**SAN MARCOS GABBRO** Weathered damp brownish gray strong biotite hornblende GABBRO ROCK excavates to silty medium to coarse sand			
4								
					TRENCH TERMINATED AT 5/ FEET No groundwater encountered			

Figure A-6,
Log of Trench T 6, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 7 ELEV (MSL) _____ DATE COMPLETED 04 13 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** *Loose very moist dark brown Silty fine SAND porous*			
2			▼		Seepage			
4				SM	**OLD ALLUVIUM** Extremely dense damp reddish brown cemented Silty coarse SAND massive, well graded			
					TRENCH TERMINATED AT 4/ FEET (Refusal) Seepage at 3 feet			

Figure A-7,
Log of Trench T 7, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ◧ STANDARD PENETRATION TEST
- ■ DRIVE SAMPLE (UNDISTURBED)
- ⊠ DISTURBED OR BAG SAMPLE
- ◥ CHUNK SAMPLE
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 8	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					ELEV (MSL) _____ DATE COMPLETED 04 13 2005			
					EQUIPMENT JD 510 24			
					MATERIAL DESCRIPTION			
0		+ +			**SAN MARCOS GABBRO**			
		+ +			Weathered damp medium dark brownish gray strong biotite hornblende			
		+ +			GABBRO ROCK			
2		+ +						
		+ +						
		+ +						
4		+ +						
					TRENCH TERMINATED AT 5 FEET			
					No groundwater encountered			

Figure A 8,
Log of Trench T 8, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 9 ELEV (MSL) _____ DATE COMPLETED 04 13 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SC	**TOPSOIL** Loose very moist dark brown Clayey to Silty fine to medium SAND porous			
2					**SAN MARCOS GABBRO** Weathered very moist dark reddish brown to olive moderately strong biotite hornblende GABBRO ROCK with thin strong peg dikes and selvages of metasedimentary (quartz)			
4					TRENCH TERMINATED AT 5 FEET (Refusal on dikes and siliceous metasedimentary selvages) No groundwater encountered			

Figure A 9,
Log of Trench T 9, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 10 ELEV (MSL) _____ DATE COMPLETED 04 13 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** *Loose moist dark brown Silty fine to medium SAND*			
2					**SAN MARCOS GABBRO** Weathered humid moderately strong biotite hornblende GABBRO ROCK			
					TRENCH TERMINATED AT 3/ FEET (Near refusal) No groundwater encountered			

Figure A-10,
Log of Trench T 10, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ◧ STANDARD PENETRATION TEST
- ■ DRIVE SAMPLE (UNDISTURBED)
- ⊠ DISTURBED OR BAG SAMPLE
- ◥ CHUNK SAMPLE
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 11 ELEV (MSL) _____ DATE COMPLETED 04 13 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose very moist dark brown Silty medium to coarse SAND very porous roots			
2					**SAN MARCOS GABBRO** Very weathered moist dark gray olive strong GABBRO ROCK excavates to a silty medium to coarse sand			
4					TRENCH TERMINATED AT 5 FEET No groundwater encountered			

Figure A-11,
Log of Trench T 11, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ◧ STANDARD PENETRATION TEST
- ■ DRIVE SAMPLE (UNDISTURBED)
- ⊠ DISTURBED OR BAG SAMPLE
- ◥ CHUNK SAMPLE
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 12 ELEV (MSL) _____ DATE COMPLETED 04 13 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** *Loose dry medium brown Gravelly Silty medium SAND very porous roots*			
2					**SAN MARCOS GABBRO** Weathered damp grayish brown moderately strong biotite hornblende GABBRO ROCK			
4								
6					TRENCH TERMINATED AT 6 FEET No groundwater encountered			

Figure A-12,
Log of Trench T 12, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ⊠ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◪ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 13	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					ELEV (MSL) _____ DATE COMPLETED 04 13 2005			
					EQUIPMENT JD 510 24			
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose, dry to humid, dark brown, Gravelly, Silty, fine to medium SAND			
2					**SAN MARCOS GABBRO** Very weathered fractured medium to light brownish gray strong GABBRO ROCK excavates to silty medium to coarse sand			
4								
6								
					TRENCH TERMINATED AT 7 FEET No groundwater encountered			

Figure A-13,
Log of Trench T 13, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◣ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 14 ELEV (MSL) _____ DATE COMPLETED 04 13 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose moist dark brown Silty fine to medium SAND porous			
2					**SAN MARCOS GABBRO** Very weathered damp medium gray brown moderately strong GABBRO ROCK excavates to a coarse sand			
4								
					TRENCH TERMINATED AT 5 FEET No groundwater encountered			

Figure A-14,
Log of Trench T 14, Page 1 of 1

07511 32-01 GPJ

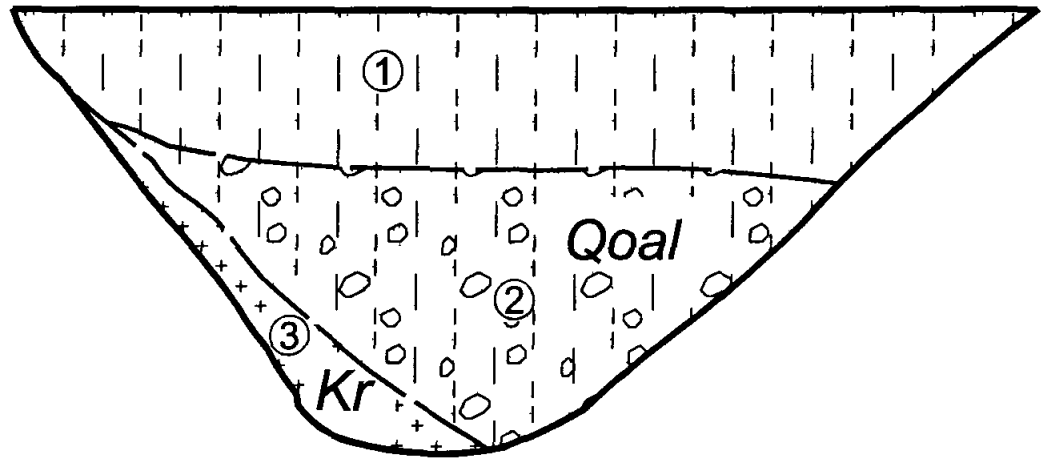
SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

WARNER RANCH
SAN DIEGO COUNTY, CALIFORNIA

SW NE



SCALE 1 ≅ 4
HORIZONTAL = VERTICAL

① TOPSOIL / COLLUVIUM
Loose very moist dark brown Silty fine SAND very porous roots

② OLD ALLUVIUM
Medium dense moist light to medium brown to reddish brown Gravelly Silty fine- to coarse-grained SAND well graded little porosity

③ RAINBOW GRANITE
Slightly weathered moist light brown to reddish brown strong GRANITIC ROCK

TRENCH T 15

GEOCON
INCORPORATED
GEOTECHNICAL CONSULTANTS
6960 FLANDERS DRIVE SAN DIEGO CALIFORNIA 92121 2974
PHONE 858 558 6900 FAX 858 558 6159
PROJECT NO 007511 32 01
FIGURE A 15
DATE

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 16 ELEV (MSL) _____ DATE COMPLETED 04 14 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose very moist dark brown Silty fine to medium grained SAND			
2								
4				SM	**OLD ALLUVIUM** Medium dense to dense damp medium to light reddish brown Silty fine to medium grained SAND massive indurated with little porosity			
6								
8					Angular clast of metasedimentary rock			
10					TRENCH TERMINATED AT 10/ FEET (Near refusal) No groundwater encountered			

Figure A-16,
Log of Trench T 16, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◥ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 17 ELEV (MSL) _____ DATE COMPLETED 04 14 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0					**COLLUVIUM** *Loose moist medium to dark brown Silty medium grained SAND porous* with roots			
2				SM				
4					**OLD ALLUVIUM** Medium dense moist medium brown to reddish brown Silty fine to coarse grained SAND massive indurated and well graded			
6				SM				
8								
					TRENCH TERMINATED AT 9 FEET No groundwater encountered			

Figure A-17,
Log of Trench T 17, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▣ STANDARD PENETRATION TEST
- ■ DRIVE SAMPLE (UNDISTURBED)
- ⊠ DISTURBED OR BAG SAMPLE
- ◥ CHUNK SAMPLE
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 18 ELEV (MSL) _____ DATE COMPLETED 04 14 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**COLLUVIUM** Very loose moist dark brown Silty fine to medium grained SAND			
2								
4				SC CL	Loose to stiff very moist dark reddish brown very Clayey fine to coarse SAND to Sandy CLAY porous pinholes roots			
6								
8				SM	**OLD ALLUVIUM** Medium dense moist medium reddish brown Silty fine to coarse SAND massive indurated and well graded trace clay			
10								
12					TRENCH TERMINATED AT 12 FEET No groundwater encountered			

Figure A-18,
Log of Trench T 18, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

TRENCH T 19

ELEV (MSL) _____ DATE COMPLETED 04 14 2005

EQUIPMENT JD 510 24

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
0								
2	T19 1			SM	**OLD ALLUVIUM** Medium dense to dense damp medium reddish brown Silty fine to coarse grained SAND massive indurated and well graded		154 9	7 0
4	T19 2							
					TRENCH TERMINATED AT 5/ FEET No groundwater encountered			

Figure A-19,
Log of Trench T 19, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◪ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 20 ELEV (MSL) _____ DATE COMPLETED 04 14 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0					**COLLUVIUM** Loose very moist dark brown Silty fine to medium SAND			
2				SM				
4					Becomes slightly clayey			
6					**OLD ALLUVIUM** Medium dense to dense medium reddish brown Silty fine to coarse grained SAND massive indurated and well graded with grit size sand			
8				SM				
10								
					TRENCH TERMINATED AT 11 FEET No groundwater encountered			

Figure A-20,
Log of Trench T 20, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 21	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					ELEV (MSL) _____ DATE COMPLETED 04 14 2005			
					EQUIPMENT JD 510 24			
					MATERIAL DESCRIPTION			
0				SC	**OLD ALLUVIUM** *Medium dense damp medium* to light reddish brown Clayey fine to coarse SAND weathered formation?			
2								
4				SM	Medium dense to dense moist medium reddish brown Silty fine to coarse SAND trace clay massive indurated and well graded			
6								
8								
10								
12								
					TRENCH TERMINATED AT 13 FEET No groundwater encountered			

Figure A 21,
Log of Trench T 21, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ⊠ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◪ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 22 ELEV (MSL) _____ DATE COMPLETED 04 14 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose humid medium to dark gray brown Silty fine to medium SAND very porous roots			
2				SM	**OLD ALLUVIUM** Medium dense damp medium reddish brown Silty fine to coarse grained SAND with some clay weathered formation?			
4								
6				SM	Medium dense to dense moist medium reddish brown Silty fine to coarse grained SAND massive indurated and well graded			
8								
					TRENCH TERMINATED AT 9 FEET No groundwater encountered			

Figure A-22,
Log of Trench T 22, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◥ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 23	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					ELEV (MSL) _____ DATE COMPLETED 04 14 2005			
					EQUIPMENT JD 510 24			
					MATERIAL DESCRIPTION			
0					**ALLUVIUM** Loose damp to moist dark brown Gravelly Silty medium to coarse grained SAND porous roots			
2				SM				
4				SM				
6					**OLD ALLUVIUM** Medium dense to dense moist medium to dark reddish brown Silty fine to coarse grained SAND indurated and well graded			
					TRENCH TERMINATED AT 7/ FEET No groundwater encountered			

Figure A-23,
Log of Trench T 23, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◣ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 24 ELEV (MSL) _____ DATE COMPLETED 04 14 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0					**ALLUVIUM** Loose damp light yellow brown very Gravelly Silty coarse grained SAND			
2								
4				SM GM	Lag gravel of granitic boulders (caving)			
6								
8					**OLD ALLUVIUM** Medium dense very moist to wet light reddish brown Silty coarse grained Gravelly SAND			
10				SM				
12					**WOODSON MT GRANODIORITE** Weathered, very moist, light brown, moderately strong GRANITIC ROCK TRENCH TERMINATED AT 12 FEET *No groundwater encountered*			

Figure A-24,
Log of Trench T 24, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 25 ELEV (MSL) _____ DATE COMPLETED 04 14 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose very moist dark gray brown Silty fine to medium grained SAND			
2								
4				SM	**OLD ALLUVIUM** Medium dense moist medium reddish brown Silty fine to coarse grained SAND			
6								
8			▼		Seepage (possibly perched on bedrock or cemented (durapan) at depth)			
					TRENCH TERMINATED AT 8/ FEET Seepage at 8 feet			

Figure A-25,
Log of Trench T 25, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▮ STANDARD PENETRATION TEST
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▨ DISTURBED OR BAG SAMPLE
- ◥ CHUNK SAMPLE
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 26 ELEV (MSL) _____ DATE COMPLETED 04 15 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose very moist dark gray brown Silty fine to medium grained SAND			
2				SM	**OLD ALLUVIUM** Medium dense to dense damp medium reddish brown Silty fine to coarse SAND massive well graded indurated			
4					TRENCH TERMINATED AT 8 / FEET Groundwater encountered at 8 feet			

Figure A-26,
Log of Trench T 26, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▩ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◪ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

TRENCH T 27

ELEV (MSL) _____ DATE COMPLETED 04 15 2005

EQUIPMENT JD 510 24

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
0				SM	**TOPSOIL** Loose very moist dark gray brown Silty fine to medium SAND porous numerous roots			
2				SM	**OLD ALLUVIUM** *Medium dense moist* medium reddish brown Silty fine to coarse SAND			
4	T27 1			SM	Extremely dense cemented medium reddish brown Silty fine to coarse SANDSTONE, durapan over 12 thick (maybe marginally rippable)			
					TRENCH TERMINATED AT 5/ FEET (Refusal) No groundwater encountered			

Figure A-27,
Log of Trench T 27, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◥ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT *IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES*

PROJECT NO 07511 32 01

TRENCH T 28

ELEV (MSL) _____ DATE COMPLETED 04 15 2005

EQUIPMENT JD 510 24

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
0					**ALLUVIUM**			
2				SM	Loose very moist dark brown Silty fine to coarse SAND porous roots			
4					Loose moist light reddish brown medium to coarse SAND mostly massive but with some thin lenticular interbedded silty sands			
6	T28 1							
8				SW/SP				
10								
12			▼		Groundwater at 13 feet			
14								
					TRENCH TERMINATED AT 15 FEET (Caving badly) Groundwater encountered at 13 feet			

Figure A-28,
Log of Trench T 28, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▩ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◪ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT *IS NOT WARRANTED TO BE REPRESENTATIVE* OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 29 ELEV (MSL) _____ DATE COMPLETED 04 15 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (PCF)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0					**ALLUVIUM** Loose moist dark brown Silty fine to coarse SAND porous with roots trace clay			
2				SM				
4								
					OLD ALLUVIUM Medium dense moist medium to dark reddish brown Silty SAND			
6								
8				SM				
10				SM	Extremely dense moist medium reddish brown cemented Silty fine to coarse SAND			
					TRENCH TERMINATED AT 11 FEET (Near refusal) No groundwater encountered			

Figure A-29,
Log of Trench T 29, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◣ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 30	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					ELEV (MSL) _____ DATE COMPLETED 04 15 2005			
					EQUIPMENT JD 510 24			
					MATERIAL DESCRIPTION			
0				SC	**TOPSOIL** Loose to soft very moist dark brown Clayey to Silty fine to medium SAND porous with roots			
2								
4				SM	**OLD ALLUVIUM** Medium dense moist medium reddish brown Silty fine to coarse grained SAND indurated and well graded			
6					**SAN MARCOS GABBRO** Very weathered moist medium brown olive moderately strong biotite hornblende GABBRO ROCK			
					TRENCH TERMINATED AT 7 FEET No groundwater encountered			

Figure A-30,
Log of Trench T 30, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

TRENCH T 31

ELEV (MSL) _____ DATE COMPLETED 04 15 2005

EQUIPMENT JD 510 24

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
0								
2				SM	**ALLUVIUM** Loose moist dark brown Silty fine to coarse SAND very porous roots burrows			
4				SW/SP	Loose damp to moist light yellow brown to reddish brown medium to coarse SAND with thin silty lenticular layers friable noncohesive when disturbed			
6								
8								
10								
12			▼		Groundwater at approx 12 feet			
					TRENCH TERMINATED AT 13/ FEET (Caving badly) Groundwater encountered at 12 feet			

Figure A-31,
Log of Trench T 31, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◣ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 32 ELEV (MSL) _____ DATE COMPLETED 04 15 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0					**ALLUVIUM** Loose moist dark brown Silty fine to coarse SAND very porous with burrows roots			
2				SM				
4								
6					Loose moist to very moist light yellow brown medium to coarse SAND friable non cohesive when disturbed			
8								
10				SP	Caving			
12			▼		Groundwater at 12 feet			
14								
					TRENCH TERMINATED AT 15 FEET (Caving badly) Groundwater encountered at 12 feet			

Figure A-32,
Log of Trench T 32, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◥ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

TRENCH T 33

ELEV (MSL) _____ DATE COMPLETED 04 15 2005

EQUIPMENT JD 510 24

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (%)
0					**ALLUVIUM** Loose moist dark grayish brown Silty fine to medium SAND porous roots burrows			
2				SM				
4								
6					Cobble size lag gravelly sand			
8				SC	**OLD ALLUVIUM** Medium dense moist medium to dark reddish brown Clayey fine to coarse SAND			
10	T33 1			SM	Medium dense to dense moist medium reddish brown Silty fine to coarse grained SAND massive well graded indurated trace clay cobble			
12								
14	T33 2			SM	Medium dense to dense moist, olive brown to brown Silty fine SAND micaceous, with calcium carbonate, small concretionary inclusions			
					TRENCH TERMINATED AT 15 FEET No groundwater encountered			

Figure A-33,
Log of Trench T 33, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◪ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

TRENCH T 34

ELEV (MSL) _____ DATE COMPLETED 04 15 2005

EQUIPMENT JD 510 24

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
0				SM	**ALLUVIUM** Loose humid dark brown Silty fine SAND porous with roots			
2					Loose damp light gray tan fine to medium SAND friable noncohesive when disturbed laminated			
4								
6					6 layer of rounded cobble (granitic)			
8				SP				
10								
12								
14			▼		Becomes very moist to wet (possible seepage) with basal lag gravel			
				SC	**OLD ALLUVIUM** Medium dense to dense very moist dark reddish brown Clayey fine to coarse grained SAND with some silt, massive, indurated			

TRENCH TERMINATED AT 15 FEET
Seepage at 14 feet

Figure A 34,
Log of Trench T 34, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◥ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

TRENCH T 35

ELEV (MSL) _____ DATE COMPLETED 04 15 2005

EQUIPMENT JD 510 24

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
0				SM	**TOPSOIL** Loose, dry, dark brown, Silty, fine to medium SAND, porous, roots			
2				SM	**OLD ALLUVIUM** Medium dense to dense moist medium reddish brown Silty fine to coarse SAND with some clay massive indurated well graded			
4								
					TRENCH TERMINATED AT 5 FEET No groundwater encountered			

Figure A 35,
Log of Trench T 35, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

TRENCH T 36

ELEV (MSL) _____ DATE COMPLETED 04 15 2005

EQUIPMENT JD 510 24

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (PCF)	MOISTURE CONTENT (/)
0					**ALLUVIUM** Loose damp dark gray brown very Silty fine SAND to Sandy SILT with abundant micaceous laminations			
2				SM ML				
4								
6					Loose moist light brown medium to coarse SAND friable noncohesive when disturbed			
8								
10				SW/SP				
12			▼		Groundwater at 13 feet			
14					TRENCH TERMINATED AT 14 FEET (Caving badly) Groundwater encountered at 13 feet			

Figure A-36,
Log of Trench T 36, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▩ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◪ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 37 ELEV (MSL) _____ DATE COMPLETED 04 15 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (PCF)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0					**ALLUVIUM** Loose moist dark gray brown very Silty fine SAND to Sandy SILT very micaceous			
2								
4								
6				SM/ML				
8					Becomes wet to saturated			
10			▼		Seepage at 10 feet and becomes more sandy			
12								
14					TRENCH TERMINATED AT 14 FEET (Caving badly) Seepage at 10 feet			

Figure A-37,
Log of Trench T 37, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▩ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◪ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

TRENCH T 38

ELEV (MSL) _____ DATE COMPLETED 04 15 2005

EQUIPMENT JD 510 24

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
0					**ALLUVIUM** Loose moist dark gray brown very Silty fine to coarse SAND very porous roots very micaceous			
2				SM				
4								
6								
8			▼	SW/SP	Loose wet to saturated light yellow brown medium to very coarse grained SAND very friable noncohesive caving in Groundwater encountered at 9 feet			
10					TRENCH TERMINATED AT 10 FEET (Caving badly) Groundwater encountered at 9 feet			

Figure A-38,
Log of Trench T 38, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◥ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 39	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					ELEV (MSL) _____ DATE COMPLETED 04 15 2005			
					EQUIPMENT JD 510 24			
					MATERIAL DESCRIPTION			
0					**ALLUVIUM** Loose damp to moist dark brown very Gravelly Silty medium SAND porous with numerous roots			
2				SM GM				
4								
6					Medium dense to dense veery moist dark brown Silty very coarse GRAVEL gabbro boulders to 2 diameter			
8			▼	GM				
10								
					TRENCH TERMINATED AT 11 FEET (Refusal on boulders) Groundwater encountered at 9 feet			

Figure A-39,
Log of Trench T 39, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▩ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◪ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 40 ELEV (MSL) _____ DATE COMPLETED 04 15 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (PCF)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
0					**OLD ALLUVIUM** Medium dense damp light to medium reddish brown Silty to Sandy coarse GRAVEL subangular to subrounded granitics and metasediments in indurated matrix represents and old alluvial fan or stream deposit			
2				GM				
4								
6					TRENCH TERMINATED AT 6 FEET (Near refusal) No groundwater encountered			

Figure A-40,
Log of Trench T 40, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ⊠ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◣ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 41	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					ELEV (MSL) _____ DATE COMPLETED 04 15 2005 EQUIPMENT JD 510 24			
					MATERIAL DESCRIPTION			
0				GC	**OLD ALLUVIUM** Dense damp medium reddish brown Clayey to Sandy angular GRAVEL with some silt indurated well graded			
2								
					TRENCH TERMINATED AT 3 FEET (Refusal on gravel) No groundwater encountered			

Figure A-41,
Log of Trench T 41, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 42 ELEV (MSL) _____ DATE COMPLETED 04 15 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				CL	**TOPSOIL** Stiff moist dark brown very Sandy CLAY			
2					**SAN MARCOS GABBRO** Very weathered layered olive to yellow brown ultrabasic GABBRO ROCK with calcium carbonate fracture linings			
4					TRENCH TERMINATED AT 5 FEET (Refusal on cemented rock) No groundwater encountered			

Figure A-42,
Log of Trench T 42, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- DISTURBED OR BAG SAMPLE
- STANDARD PENETRATION TEST
- CHUNK SAMPLE
- DRIVE SAMPLE (UNDISTURBED)
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 43 ELEV (MSL) _____ DATE COMPLETED 04 15 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (PCF)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0					**OLD ALLUVIUM** Very stiff very moist dark reddish brown Gravelly CLAY possible ancient slopewash or mudflow deposit of very weathered old alluvium (?)			
2				CL GC				
4								
6					TRENCH TERMINATED AT 6 FEET (Refusal on boulders) No groundwater encountered			

Figure A-43,
Log of Trench T 43, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◥ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 44 ELEV (MSL) _____ DATE COMPLETED 04 15 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0				SM	**TOPSOIL** Loose moist dark brown Silty fine to medium SAND porous roots			
2				SM	**OLD ALLUVIUM** Medium dense damp light reddish brown Silty fine to medium SAND			
4								
6		+ + + + + +			**SAN MARCOS GABBRO** Very weathered damp to humid olive gray strong biotite hornblende GABBRO ROCK			
					TRENCH TERMINATED AT 6 FEET No groundwater encountered			

Figure A 44,
Log of Trench T 44, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- SAMPLING UNSUCCESSFUL
- STANDARD PENETRATION TEST
- DRIVE SAMPLE (UNDISTURBED)
- DISTURBED OR BAG SAMPLE
- CHUNK SAMPLE
- WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 45 ELEV (MSL) _____ DATE COMPLETED 04 15 2005 EQUIPMENT JD 510 24	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					MATERIAL DESCRIPTION			
0					**OLD ALLUVIUM** Dense damp light to medium reddish brown Silty fine to coarse Gravelly SAND angular clasts of granitic and metasedimentary rocks possible isolated remnant of an old alluvial fan			
2				SM GM				
4								
6					TRENCH TERMINATED AT 6 FEET (Cut slope) No groundwater encountered			

Figure A-45,
Log of Trench T 45, Page 1 of 1

07511 32-01 GPJ

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◥ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

PROJECT NO 07511 32 01

DEPTH IN FEET	SAMPLE NO	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	TRENCH T 46	PENETRATION RESISTANCE (BLOWS/FT)	DRY DENSITY (P C F)	MOISTURE CONTENT (/)
					ELEV (MSL) _____ DATE COMPLETED 04 15 2005			
					EQUIPMENT JD 510 24			
					MATERIAL DESCRIPTION			
0		+ +			**WOODSON MT GRANODIORITE**			
		+ +			Very weathered damp light yellow brown strong GRANITIC ROCK			
2		+ +			excavates to a clayey coarse sand			
		+ +						
4		+ +						
		+			TRENCH TERMINATED AT 6 FEET (Cut slope)			
					No groundwater encountered			

Figure A-46,
Log of Trench T 46, Page 1 of 1

07511 32-01 GP

SAMPLE SYMBOLS

- ☐ SAMPLING UNSUCCESSFUL
- ▨ DISTURBED OR BAG SAMPLE
- ◧ STANDARD PENETRATION TEST
- ◥ CHUNK SAMPLE
- ■ DRIVE SAMPLE (UNDISTURBED)
- ▼ WATER TABLE OR SEEPAGE

NOTE THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES

APPENDIX B

APPENDIX B

GRADATION CURVE
(GRAIN SIZE CHARACTERISTICS)

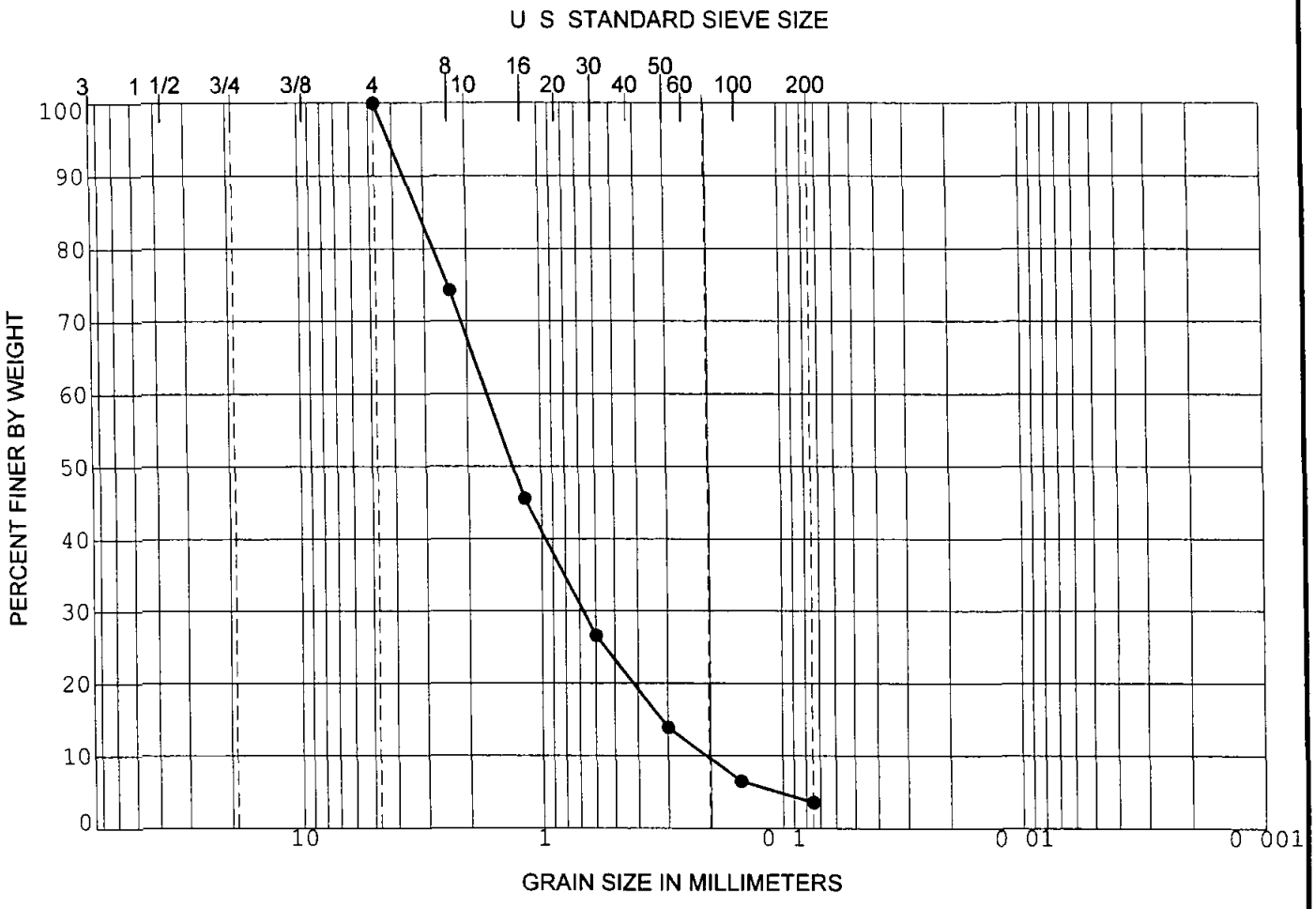
FOR

WARNER RANCH
SAN DIEGO COUNTY, CALIFORNIA

PROJECT NO 07511-32-01

PROJECT NO 07511 32 01

GRAVEL		SAND			SILT OR CLAY
COARSE	FINE	COARSE	MEDIUM	FINE	



	SAMPLE	DEPTH (ft)	CLASSIFICATION	NAT WC	LL	PL	PI
●	T28 1	6 0	SW				

GRADATION CURVE

WARNER RANCH

SAN DIEGO COUNTY CALIFORNIA

07511 32-01 GPJ

Figure B 1

LIST OF REFERENCES

1 California Department of Conservation California Geological Survey *Geologic Map of the Pala 7 5 Quadrangle San Diego County California* A Digital Database Version 1 by Michael P Kennedy 2000

2 *State of California Special Study Zones Pala Quadrangle* effective date January 1 1980

3 *Landslide Hazards in the Northern Part of the San Diego County Metropolitan Area San Diego County California* DMG Open File Report 95 04 1995

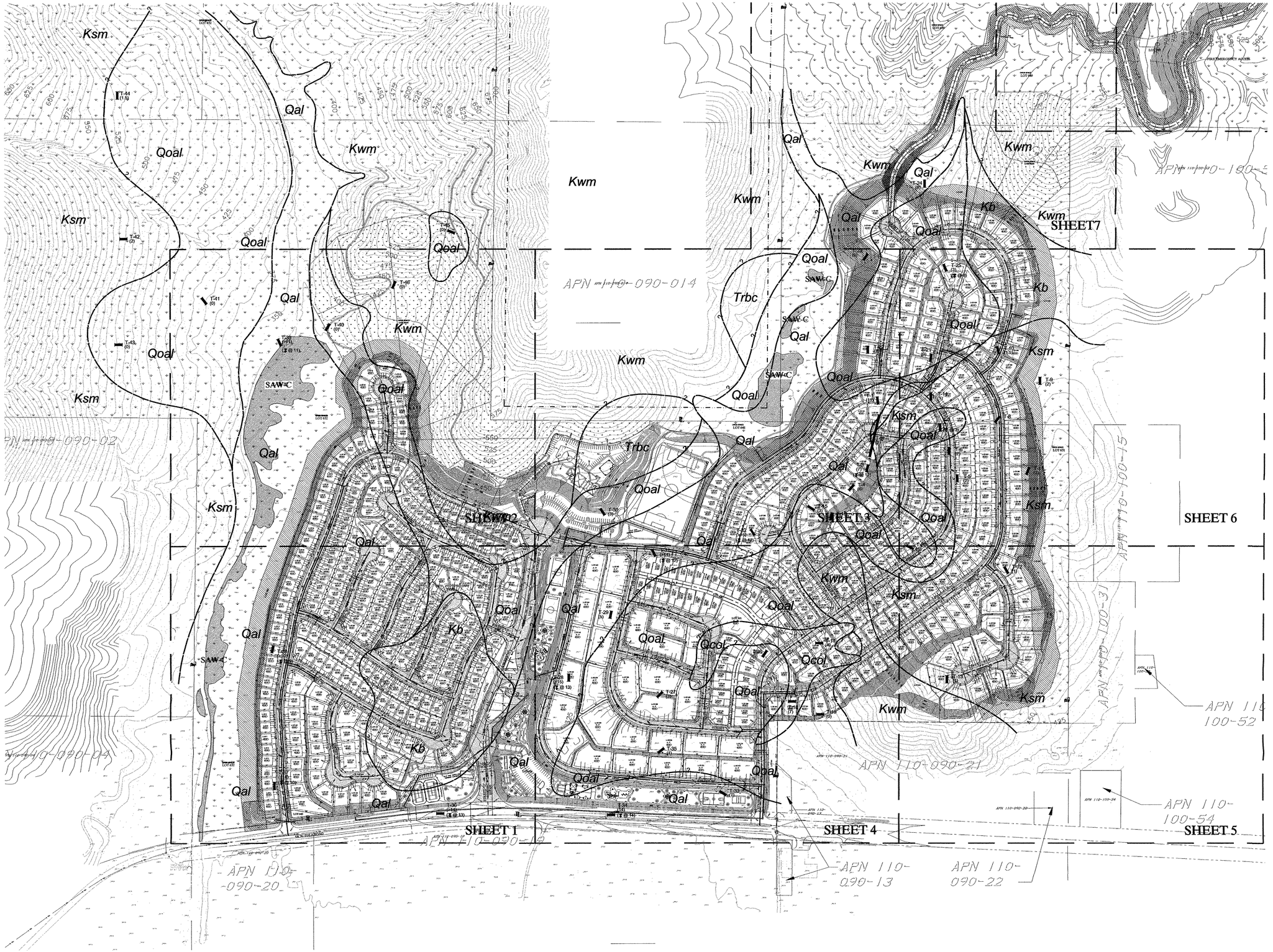
4 Probabilistic Seismic Hazard Assessment for the State of California DMG Open File Report 96 08 1996

5 Larsen E S *Batholith and Associated Rocks of Corona Elsinore and San Luis Rey Quadrangles [15]* Geological Society of America Memoir 29 1948

6 Jennings C W *Fault Activity Map of California and Adjacent Areas* California Geologic Survey (formerly California Division of Mines and Geology) 1994

7 Miller William J *Geomorphology of the Southern Peninsular Range of California* Bulletin Geological Society of America Vol 46 pp 1535 1562 1935

8 Unpublished reports aerial photographs and maps on file with Geocon Incorporated



LEGEND

- Qal.....ALLUVIUM
- Qcol.....COLLUVIUM
- Qoal.....OLD ALLUVIUM
- Kwm.....WOODSON MT. GRANODIORITE
- Kb.....BONSALL TONALITE
- Ksm.....SAN MARCOS GABBRO
- Trbc.....BEDFORD CANYON FORMATION
- .....APPROX. LOCATION OF GEOLOGIC CONTACT (Queried Where Uncertain)
- FG-13.....APPROX. LOCATION OF EXPLORATORY BACKHOE TRENCH
- (>15).....PRELIMINARY ESTIMATED THICKNESS OF SURFICIAL DEPOSIT REQUIRING REMEDIAL GRADING
- (▽ @ 12).....DEPTH TO SEEPAGE / GROUNDWATER

GEOLOGIC MAP

WARNER RANCH
SAN DIEGO COUNTY, CALIFORNIA

GEOCON INCORPORATED
GEOTECHNICAL CONSULTANTS
6960 FLANDERS DRIVE - SAN DIEGO, CALIFORNIA 92121-2974
PHONE 858 558-6900 - FAX 858 558-6159

SCALE	DATE
1" = 200'	10 - 29 - 2009
PROJECT NO. 07511 - 32 - 01	FIGURE 1
SHEET 1 OF 1	

Y:\911\TEMPL_GEOTECH_GEOTECH_RUBEN\GEOCON 2009\07511-32-01 WARNER RANCH\SITE_7511 GEO-MAP (UPDATED 10-27-2009) .dwg